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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,349	04/19/2004	Yasuhiko Tokimasa	8012-1145-1	1034

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EXAMINER

BAREFORD, KATHERINE A

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/826,349

Applicant(s)

TOKIMASA ET AL.

Examiner

Katherine A. Bareford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

DETAILED ACTION

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru et al (US 6153265) in view of Japan 05-329432 (hereinafter '432).

Tomaru teaches a method for applying a coating solution on a moving web. Figures 1-2 and column 1, lines 5-15. A die is provided that has a slot formed between a first lip and a second lip for discharging the solution on the web. Figures 1-2 and

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column 4, lines 1-25. The first lip is disposed downstream from the second lip in a feeding direction of the web. Figures 1-2 and column 4, lines 1-25. A regulation member is provided for regulating the coating width of the coating solution to be applied. Figures 1-2 and column 4, lines 1-10 (plates 7). The die is placed to provide a first gap between the first lip and the web and a second gap between the second lip and the web. Figure 2. The die can be disposed such that the gap between the regulation member and the web has a distance between the distance of the first gap and second gap. Column 7, lines 30-45 and Figure 9 and 11.

Claim 7: the applied coating thickness can be less than 20 microns. Column 7, lines 30-65 (note the thicknesses in Table 3).

Tomaru teaches all the features of these claims except that the first gap is smaller than the second gap, the use of the adjusting device (claim 5) and the length of the first lip (claim 6). Tomaru does teach that it is desired to place the point P (the point on the regulating member closest to the web) upstream of the centerline of the width of the slot and to provide P such that the product of the distance between the nearest point P and the surface of the support (T) <sup>and</sup> ~~in~~ the width of the slot (w) is  $1 \text{ mm}^2$  to  $6 \times 10^{-5} \text{ mm}^2$ .

However, '432 teaches applying coating from a die onto a moving web. Abstract and figure 1. A die is provided that has a slot formed between a first lip and a second lip for discharging coating onto the web. Abstract and figure 1. The first lip is disposed downstream from the second lip in a feeding direction of the web. Abstract and figure 1. The die is placed to provide a first gap between the first lip and the web and a second

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gap between the second lip and the web. Abstract, figures 1-2 and paragraph [0005].

The first gap can be smaller than the second gap. Abstract, figures 1-2 and paragraph [0005] (as the lower lip is further back from the upper, or first, lip). The length of the first lip can be 0.1 mm or 100 microns. Abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tomaru to also provide the regulating plate at a position such that the third gap is between the first and second gaps when the first gap is smaller than the second gap as suggested by '432, in order to provide a coating of a desirable width, because Tomaru teaches that the point P (the point on the regulating member closest to the web) upstream of the centerline of the width of the slot is provided that the product of the distance between the nearest point P and the surface of the support (T) <sup>and</sup> <sub>^</sub> the width of the slot (w) is  $1 \text{ mm}^2$  to  $6 \times 10^{-5} \text{ mm}^2$  when using a slot die to coat a web and '432 teaches that it is desirable to coat when the first gap is smaller than the second gap when using a slot die to coat a web, and when P is calculated for such a die it will still provide locations such that the third gap is between the first and second gaps. It would further have been obvious to modify Tomaru in view of '432 to provide that the position of the regulation member is adjusted with an adjustment device with an expectation of desirable and efficient results, since Tomaru teaches to provide the position of the regulation member within a desired range, and it would be desirable to provide adjustment to allow positioning of the regulation member within the desired range. It would further have been obvious to modify Tomaru in view of '432

to provide that the length of the first lip is 100 microns with an expectation of desirable and efficient results, since '432 teaches that 100 microns is a desirable length for the first lip.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru in view of '432 as applied to claims 1 and 5-7 above, and further in view of Shibata et al (US 5435847).

Tomaru in view of '432 provide all the features of this claim except that the regulation member is formed of metal.

However, Shibata teaches that when providing a slot die coating apparatus to coat a moving web, that it is conventional for the material of regulating members to be metal or metallic material. See the abstract, column 4, lines 1-25 and figure 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tomaru in view of '432 to make the regulating member from a metal material as suggested by Shibata, in order to provide a desirable regulating member because the regulating member of Tomaru in view of '432 must be made of some material and Shibata teaches that metal is a desirable material for regulating members.

5. Claims 3-4 rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru in view of '432 and Shibata as applied to claim 2 above, and further in view of Gartmann et al (US 5853482).

Tomaru in view of '432 and Shibata provide all the features of these claims except that the regulation member is formed of metal coated with fluoride resin.

However, Gartmann teaches that when providing a slot die coating apparatus to coat a moving web, that it is desirable for the die materials or material in contact with the coating solution to be coated with a non-stick material such as polytetrafluoroethylene (PTFE) (a fluoride resin). Column 1, lines 5-10, column 2, lines 60-65 and column 6, lines 25-35.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tomaru in view of '432 and Shibata to further coat the regulating member with PTFE as suggested by Gartmann, in order to provide a desirable regulating member because the regulating member of Tomaru in view of '432 and Shibata would be made from metal, and Gartmann teaches that it is desirable to coat die surfaces in contact with coating solution with PTFE.

### *Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KATHERINE BAREFORD  
PRIMARY EXAMINER